R E P O R T R E S U M E S

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EPOCH, EDUCATIONAL PROGRAMMING OF CULTURAL HERITAGE--ESEA TITLE I SUBMISSION TO PACE FOR CONTINUATION GRANT. ADDENDUM TO GRANT CONTINUATION APPLICATION, MAY 1967.

BERKELEY UNIFIED SCHOOL DISTRICT, CALIF.

PUB DATE MAY 67

GRANT OEG-3-7-704059-4436

EDRS PRICE MF-$0.25 HC-$0.84 19P.

DESCRIPTORS- *EDUCATIONAL OBJECTIVES, *PROGRAM PLANNING, *HUMANITIES INSTRUCTION, *INSTRUCTIONAL TECHNOLOGY, *RESOURCE CENTERS, PILOT PROJECTS, PROGRAM PROPOSALS, PROGRAM EVALUATION, EDUCATIONAL NEEDS, INTERDISCIPLINARY APPROACH, EDUCATIONAL INNOVATION, INFORMATION RETRIEVAL, BERKELEY, CALIFORNIA, EPOCH, ESEA TITLE 3

THIS ADDENDUM TO A REPORT ON THE DEVELOPMENT OF A PROGRAM TO TEACH AND INTERRELATE ARTS AND HUMANITIES INSTRUCTION THROUGH THE USE OF EXTENSIVE RESOURCES, INNOVATIVE TEACHING METHODS, AND ADVANCED EDUCATIONAL TECHNOLOGY OUTLINES THE ACTIVITIES AND GOALS OF THE ALREADY ACCOMPLISHED PLANNING STAGE OF THE PROGRAM AND OF THE PILOT (1967-68) AND OPERATIONAL (1968-69) STAGES. THE DESCRIPTION OF THE PROCEDURES FOR EVALUATING THE PILOT ACTIVITIES NOTES THE ANTICIPATED OUTCOMES, EVALUATION PERSONNEL, AND MEASUREMENT INSTRUMENTS TO BE USED. PROJECTED EXPENDITURES AS OF MAY 1967 ARE ESTIMATED AT $48,610. (LB)

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ESEA TITLE III SUBMISSION TO

pace epoch

FOR CONTINUATION GRANT

EDUCATIONAL PROGRAMING OF CULTURAL HERITAGE

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Addendum to Grant Continuation Application, May 1967
1967-1968 Grant Number OEG-3-7-704059-4436

Goals for EPOCH

Project EPOCH'S main goal is to increase interest in and understanding of the humanities and their contribution to the enrichment and enjoyment of life.

Long-Term Educational Objectives	Short-Term Educational Objectives
Create a new environment for learning where comprehensive resources and advanced technology will be synthesized in the teaching of man's cultural heritage	Increase school planning of resources and facilities for teaching of the humanities
Develop and evaluate innovative techniques to improve the understanding and teaching of the humanities	Expose students to audio, visual and tactile learning experiences in the humanities in group and individual situations
Provide stimulus, information and guidance for students, teachers and parents in exemplary programs in the humanities	Improve students' exposure to basic principles and interrelationships of the creative arts
Broaden student view of the plurality of human cultures and the influence of time and place which brought them about	Increase student understanding of the interrelationship of literature, history, the arts and sciences
Increase general appreciation of the contribution of the humanities to understanding of one's own cultural heritage	Expand student use of school and community resources
Expand teacher, student and parent participation in the humanities as a source of aesthetic pleasure, information and personal growth	Provide teachers with varied opportunities for experimenting with more flexible approaches to the humanities in workshops and institutes

The importance of study of the humanities is now being widely acknowledged at every educational level. The need for more emphasis and improved teaching has been strongly restated at both State and Federal levels. The challenge and need are here.

The major emphasis of EPOCH is on program design and development, and resource search. This is our overriding concern because we believe this is the unique contribution of EPOCH:

New approaches to understanding the humanities
New strategies for teaching them
New resources to enrich their presentation
New ways to use existing materials and equipment
New materials to develop where needed

In the pilot and operational periods EPOCH can carry on these innovative exemplary activities to the point where it can offer schools everywhere stimulus, guidance, practical techniques, replicable installations and adaptable programs only if there is support for continuous development of of curriculum-related, EPOCH-oriented programs in which quality content, resources, teaching techniques, and student involvement are creatively integrated.

Summary of Present Status

EPOCH, funded in April 1966 for six months, began formal operation in September with no facilities. The project had occupied its present quarters for two months when the application was submitted for the pilot period. A 60-day extension was granted and then a 30-day additional extension confirmed May 31 as the end date of the planning period on the original budget.

The Planning Period (Please see Planning Period Chart)

The project has accomplished the following:

1. Studies of curriculum need and program planning in the humanities were made with some 24 teachers representing the Berkeley Unified School District and other Bay Area Districts and representing elementary, intermediate and secondary levels.

2. Background information was gathered by specialists in the fields of anthropology, archeology, architecture, art, dance, drama, education, geography, history, literature, music, philosophy, religion, natural and physical science and social and political science. They outlined significant areas of their subjects for study, prepared commentaries, and filled-in several thousand EPOCH Data Cards.

3. The EPOCH Data Card was developed for resource and information retrieval. Each card carries about 70 details of information for reference use.

4. Design studies and equipment testing for multi-media enrichment for the teaching of the humanities resulted in room-size facilities for testing EPOCH ideas.

   a. In use in December was a 22-foot EPOCH demonstration chamber made of 13 screens (5 feet x 10 feet) for rear and front projection. Slides, films, filmstrips, maps, tapes, records and three-dimensional objects are used to show successive stages of the development of ideas and to demonstrate the interrelationship of the disciplines to offer comparison and contrast.

   b. In use in December, the EPOCH 9-foot orientation table graphically shows world locations and time through the ages with hundreds of two and three-dimensional replicas of high points in the growth of human knowledge.

   c. In January and February two experimental resource banks for ready reference were developed.

   d. Experimental lab space for teachers and areas for individualized activity for students are undergoing trial and testing.

In addition, the project has initiated a broad program of interdistrict cooperation which has resulted in requests of many groups of teachers and administrators to meet at EPOCH. Here are some recent meetings:

Bay Area Art Supervisors
Delta Kappa Gamma
Bay Area Social Science Council
Oakland Humanities Group
California Association of Student Teachers
Alameda County Curriculum Administrators
Phi Delta Kappa Quality Teaching Center

The unanimous reaction has been a desire to participate and to duplicate EPOCH in their own districts. The summer workshop, planned with the University of California for in-service education, June 22-July 21, answers repeated requests.

EPOCH PLANNING PERIOD 1966 - 1967

NEEDS	OBJECTIVES
Better understanding of environmental influences in students of culturally diversified background on individual differences in learning.	Further identify educational and cultural needs of the participants. $8,304
New approaches in presentation of information to arouse student interest. More inclusive up-to-date sources of information and teaching materials and easier access to it.	Long-term and short term general educational objectives. $9,549
Better integration of information in a meaningful framework of humanities program.	Idea framework for the pilot demonstration. $12,135
More coordinated planning and teaching to bring out interdisciplinary relationships.	Search for appropriate information materials, devices for visualizer. $10,961
More opportunity for self-initiated learning and self-evaluation.	Evaluation of the pilot project visualizers. $3,168
More opportunity for involvement in the learning process. More opportunity for group participation and interaction in instructional situations in the humanities.	Formulation of operational forecast. $4,493 Total projected as of 5.10.67 $48,610

EPOCH PLANNING PERIOD 1966 - 1967

JULY, AUGUST, SEPTEMBER	OCTOBER - NOVEMBER
Dr. Sullivan appoints L. Vivrette EPOCH advisor. Curriculum advisors plan considered. Dr. Jarrett - Dr. Luca discuss Research Appointments.	Meeting Dean Smelser, Director of Bureau of Educational Development, Univ. Calif. Teacher conferences on needs-elementary, intermediate and secondary. On teacher training to meet needs. Meeting Dr. Ball, new Berkeley Unified School District Supervisor Title III.
Meetings with school and library, academic personnel. Visits to schools, colleges for new programming devices. Visits to museums for community resources. Dr. Oberlander on geographical approach. Visits to industry on information retrieval	Discussions with elementary, intermediate, secondary teachers on direction of concept approaches. Helen Cyr, Oakland Public School Library. EPOCH staff program planning. Dr. Church, State Dept. of Education, visits and reviews EPOCH aims.
Research staff selected - 14 specialists in own field on own time instead of four research assistants half-time in office. Program all time, all world but special emphasis 1750-1850.	EPOCH Data Cards completed for use of Researchers. Research Outline & Commentary assignments in work. School advisor group formed: meetings begin with analysis of curriculum areas and resource needs.
Consultation with IBM, Key Sort card and Unisort representatives on information retrieval. Field visit Dr. Tondow, Palo Alto Schools. Research work for EPOCH to devise EPOCH Data Card.	Information retrieval system further studied. Meeting Mr. Tom Brown, Encyclopaedia Britannica to discuss loan of resources. Field visit San Francisco State Media Center to interview Dr. Zettl. Meeting Mr. Vaughn Hamer, Berkeley High School Industrial Arts (Electronics) Development of Mock-up of Pre-Pilot Demonstration Unit.
Evaluation plans discussed. Possible members Evaluation committee reviewed.	13 Module Demonstration Projection screens with equipment stands. Borrowed equipment for experimentation. Evaluation discussion with Dr. Walcott Beatty, San Francisco State College.
One meeting community leaders. Representatives from community listed and considered. Plans for general dissemination discussed. *Office in Tolman: Office Staff 1+	Future plans discussed with school advisors. Future plans outlined with Mr. Norris Nash, (Mills College), Chairman of Oakland Museum Board. Meeting at Burlingame, PACE Directives. Visualizer installation started. **Office 1900 Addison: Office Staff 1+

EPOCH PLANNING PERIOD 1966 - 1967

DECEMBER	JANUARY
Dr. Jarrett outlines broad Humanities approach. Meeting Dr. Richard Foster confers on better focus on evaluation of student change in relation to needs.	School advisors discuss student needs in their districts when to meet them. Meeting of expanded curriculum advisors group brings special education interests. Discussion EPOCH work with Title I. Application for Pilot period reviews needs.
Dr. Moody of California State Department of Education visits and reviews EPOCH plans. Dr. Jarrett advises on educational approach after school advisor sessions. Experiments with Programming the Mock-up Pre-Pilot Demonstration. Efforts to keep program needs central to the total plan.	Meeting at EPOCH Mr. Thorslev, Dr.Nichols of Regional PACE with Monfort and Dr. Jarrett to review planning period achievments in light of objectives. Forecast plans for future application budget in light of announced objectives.
Programming demonstration, Sandia Corp. Stone Valley Meeting on humanities. Curriculum Advisory Meeting Sacramento. First draft script, tape and pic for demonstration with Edex programmer.	Bay Area Art Supervisors meet at EPOCH. Staff trip to San Francisco State College's resources in humanities. Bay Area school librarians discuss resources.
Search for visuals and other resources. Hatfield of UC, and Noone of Oakland. Dr. Casiday, SVA. Mr. Stamps of AV Electronics. Mr. Brown of McCune Sound. Purchase of some equipment borrow-other.	Individual instruction areas explored. Resource bank experiments pursued. Experimentation with various types of projection equipment. Projection surfaces for rear and front projection.
Evaluation meeting with representatives of several districts to try to find areas of observation and measurement of attitudinal and behavioral changes.	School psychologists discuss evaluation instruments: pre-visit, on-the-spot record, post-visit. School advisors discuss student needs in their districts.
Phi Delta Kappa meeting at Monterey, EPOCH report. Plans for development of cooperation with neighboring colleges and universities discussed and outlined. Meeting of Berkeley Unified Schools administrators to discuss request for extension. Wiring and panels for office completed.	Meeting Dr. Sullivan and Dr. Maves at Berkeley Unified School District office. Meeting with University of California Extension Division for summer workshop. Meeting of Museum representatives to consider areas of cooperation.

EPOCH PLANNING PERIOD 1966 - 1967

FEBRUARY - MARCH	APRIL - MAY
Meeting Mr. Cleveland, Miss Favors re cooperation with Title I. Exploration of possible needs of the group in terms of enrichment programs. Plan for later conference. Dr. Jarrett outlines future plans in line with extension period.	Review of planning activities in line with student needs and teacher aids. This time directed to improved planning of long-term relations school districts, counties, school services, evaluation operations, in line with over-all view of future services of EPOCH.
School advisors lay plans for development of curriculum plans for EPOCH visits - central focus on music - art - social studies - literature - interweave all.	Long term educational operations reviewed for planning pilot activities. Meeting Dr. Duggan, Department of Comparative Literature, University of California, to discuss University cooperation.
Dr. Kyme, Music Consultant, University of California, visits EPOCH to discuss music program. Further experiments with Pre-Pilot Demonstration. Set-up of experimental control consols. 170 questionnaires to consultants.	School advisors asked for outlines of plans for hour visit to EPOCH - on basis of special interest of each school adviso to include outline, resources, slides, films, music activities, etc. John Fleming of Electronic Futures gives sound demonstration at EPOCH.
Resource system discussion (Goldstein, Library consultant). Discussion audio-visual remote controls, William High of Laney College. Experiment Sound equipment - Dunningham (Complete one unit) Remote Control System. Curriculum Advisory Committee meetings on relationahip of evaluation to curriculum.	Plans for portable units and semi-permanent unit for schools discussed. Evaluation advisors set up design. Dr. Gaier, evaluation consultant suggests implementation.
Evaluation team works with teachers to determine base questionnaires and possible cooperation with librarians and teachers on increased interest and activity after EPOCH visit.	Evaluation meeting Dr. Beatty. Evaluation meeting Elliott and Larsen.
Dr. Sullivan calls meeting of Bay Area superintendents to review EPOCH goals. East Bay Council Social Studies at EPOCH. Dr. George Rusteika and Dr. Jack Forbes, Far West Regional Laboratory at EPOCH. National Art Educators Conference, EPOCH EXHIBIT, panel participation and visit of 100 members to EPOCH.	Dr. Edward's UC class, 20 teachers. Meeting at IDEA in Los Angeles. California Association of Student Teacher Humanities Workshop, Polytechnic High. California Supervisors of Curriculum. Development, San Jose, EPOCH participates Alameda County Curriculum Associates Bay Area Art Supervisors Meeting

Procedures for Pilot Period
1967-1968

Activities of the Pilot Period will proceed in four main tasks (as outlined in Pilot Planning Chart as Goals)

I. Develop Replicable Installations

a. The present EPOCH installation will be improved on the basis of experience during the planning period. [Classes begin in October.] See Pilot Period Chart for details.

b. An EPOCH portable classroom unit will be tested in mock-up and finished for experimental use in schools in early 1968. Specifications and costs ready May 1968.

c. A test panel for the EPOCH semi-permanent school installations will be tested in mock-up, and specification and estimates for school adaptation will be ready May 1968.

II. Develop Model Programs*

a. Continuous application will be made to the identification, evaluation and integration of existing resources. New materials will also be developed

b. Two (perhaps three) experimental programs for elementary and an equal number for secondary grades will be ready in October for use with students in the evaluation study.

III. Presentation to Students and Evaluation** of Experimental Demonstrations

a. Two two-months' schedules of demonstrations will be carried out (October to November and January 15 to March 15). Two days a week, two demonstrations a day. (See schedule in evaluation section.) Approximately 60 of these periods will be in the evaluation: eight will be open for special program development.

b. Workshops, seminars and institutes will be held late afternoons, evenings and Saturdays.

c. In 1968 a limited schedule of demonstrations in school classrooms will be undertaken with the EPOCH portable unit.

1. Structured EPOCH programs (evaluated and revised after presentations in the fall 1967 at EPOCH)

2. Unstructured curriculum-related presentations using different methods to explore flexibility of teaching approach and a variety of learning situations.

IV. Preparations for Operational Period in 1968-1969

a. Programs for the operational period will be outlined and a search for resources made.

b. Possibilities for continuing support after the termination of the operational period will be thoroughly studied.

c. Development of plans for incorporation into the Educational Park plan.

d. Investigation of possible relations of EPOCH to Model City plan.

* See following description of tentative program suggestion

** See description following of plans for evaluation study

EPOCH PILOT ACTIVITIES 1966 - 1967

LONG TERM EDUCATIONAL OBJECTIVES	SHORT TERM EDUCATIONAL OBJECTIVES
Create a new environment for learning where comprehensive resources and advanced technology will be synthesized in the teaching of man's cultural heritage.	Increase school planning of resources and facilities for teaching of the humanities.
Develop and evaluate innovative techniques to improve the understanding and teaching of the humanities. Provide stimulus, information and guidance for students and teachers in exemplary programs in the humanities.	Expose students to audio-visual and tactile learning experiences in the humanities in group and individual situations. Increase student understanding of the interrelationship of literature, history, the arts and sciences.
Broaden student view of the plurality of human cultures and influence of time and place which brought them about. Increase general appreciation of the contribution of the humanities to understanding of one's own cultural heritage.	Improve students' exposure to basic principles and interrelationships of the creative arts. Expand student use of school and community resources
Expand teacher, student and parent participation in the humanities as a source of aesthetic pleasure, information and personal growth.	Provide teachers with varied opportunities for experimenting with more flexible approaches to the humanities in workshops and institutes.

EPOCH PILOT ACTIVITIES 1966 - 1967

GOALS	PROCEDURES
DEVELOP EXEMPLARY INSTALLATIONS Improve present installation. Devise replicable school units.	Provide research opportunities. Develop exemplary facilities for demonstration and experimentation. Develop plans for replicable units for various school situations. portable -- use in classroom semi-permanent -- use existing space permanent -- for new building
DEVELOP MODEL PROGRAMS Integrate program resources at EPOCH. Organize resources in programs for schools.	Develop interdisciplinary humanities programs on elementary and secondary levels. Evaluate and develop multi-media resources for school programs. Encourage student and teacher use of community resources.
PRESENT AND EVALUATE EXPERIMENTAL DEMONSTRATIONS At EPOCH installation. In pilot school presentations.	Expose selected groups of students to experimental demonstration programs. Improve student use of school school resource materials. Develop opportunities for parent involvement. Plan school pilot presentations for January 1968. Complete evaluation program designs. Confirm evaluation criteria. Prepare instruments.
PLAN FOR OPERATIONAL PERIOD Build support structure for continuation. Work toward permanent location through broad dissemination program.	Involve Berkeley Unified School District teachers in EPOCH activities. Involve Berkeley Unified School District parents and community in EPOCH activities. Circulate information on EPOCH. Structure funding operation. Develop radio and TV contacts. Establish foundation connections. Improve County and State relations. Investigate further costs for satellite unit. Map out dissemination schedule.

EPOCH PILOT PERIOD 1966 - 1967

ACTIVITIES JUNE - JULY	AUGUST - SEPTEMBER
Prepare summer workshop. Improve view screens, table, wiring. Add to individual areas for discovery. Analyze resource bank storage sections. Plan small portable classroom unit.	Changes after workshop: Contrive darkening facilities. Install sound installation. Complete research banks and storage areas Individualized instruction areas further developed. Survey of ways to use portable unit. Prepare plans for semi-permanent installation. Prepare mock-up portable classroom unit.
Develop interdisciplinary plans in elementary and secondary subjects Equip laboratory-type workshops for teachers. Request loans from producers. Obtain experimental materials for workshop. Encourage survey of resources available in own school districts. Provide information on types of materials and equipment needed for teacher labs and workshops in the humanities.	Complete comprehensive structure EPOCH visit lesson plans. Administer pre-test programs. Procure evaluated resources for programs for schools. Consider submissions from teachers. Outline programs based on the further identification with teachers of the educational and cultural needs of their student population. Encourage flexible approaches to learning.
Involve summer workshop teachers in all plans of program approach. Involve workshop teachers in demonstrations by audio-visual experts and media specialists. Get suggestions from workshop teachers on parent involvement. Test and prepare instruments for pre-visit data, post-visit analysis and on-the-spot observation.	Schedule program outlines and resources. Develop two programs--elementary and secondary. Make trial presentations. Prepare resources for demonstration for class visits. Stimulate use of school and community resources. Work out plans for parent visits. Establish evaluation base-lines. Administer pre-visit questionnaires. Establish base for selection of students for EPOCH visits.
Hold open-houses for Berkeley teachers and administrators. Plan Berkeley Unified School District advisory activities. Identify representatives of community agencies. Form finance committee. Advance contacts with foundations. Formalize liaison relations with counties and districts. Review satellite plans and costs. ISSUE Newsletter, Bulletin.	Complete graphic outline of support structure. Employ dissemination to broaden support. Consult financial advisors (to strengthen support plan). Enlist school resource volunteers and community organizations. Seek involvement of the Master Plan Committee. Pursue Title III State personnel Prepare filmstrip for use. Prepare calendar for satellite fund drive. ISSUE Newsletter, Bulletin.

EPOCH PILOT PERIOD 1966 - 1967

OCTOBER - DECEMBER 15	DECEMBER 15 - JANUARY 15
Prepare for classes. Open resource materials for use. Make available EPOCH Data Cards in open file. Place evaluated resources in open file. Open file of producers' AV catalogs. Revise plans and bid portable classroom unit. Build portable classroom unit. Build mock-up of semi-permanent module.	Survey new library systems. Review retrieval systems. Test field unit. Complete designs and estimates. Survey related technology. Revise plans for semi-permanent installation. Prepare working drawings for semi-permanent installation and estimates.
Guide teacher-planned programs for elementary and secondary students. Assist pupil-planned programs for elementary and secondary students. Increase evaluated resources for reference. Complete plans for reaching parents. Outline EPOCH approach for in-service teacher training. Outline manual to be used with portable unit.	Meet with teachers of EPOCH experimental classes. Discuss student-planned and teacher-planned EPOCH visits as observed at EPOCH. Repeat in second session? Schedule seminar to produce plans for summer workshop. Compile resources in programs for use in school adoptions and prepare manual.
Arrange transportation for experimental classes. Schedule EPOCH teachers. Provide programs for elementary and secondary classes (Tuesday and Wednesday, two classes daily). Arrange district cooperation on resources. Make on-the-spot observations and reports (oral, taped, anecdotal recordings). Have post-test ready. Study Educational Park involvement.	Make quality control analysis of program, and materials used October-December 15. No classes. Schedule of class visits for January 15. Improve demonstration and techniques based on experience with fall classes. Improve plans for parent involvement. Solicit recommendations from teachers. Get report from students, teachers, parents Compile evaluation data for series 1. Hold teacher evaluation seminars. Administer pre-visit questionnaires group 2
Review of plans for operation phase. Try for NDEA teacher training workshop. Put broadsides and posters in schools. Talk to community meetings - P.T.A., etc. Enlarge district and community affiliations. Pursue funding steps. Prepare foundations' presentations. Prepare release on fall program. Prepare for weekend workshop. Finalize satellite figures and plans. Review with County, State, PACE. ISSUE Newsletter, Bulletin.	Review interdistrict cooperation. Set up task force with representatives of Bay Area educational institutions, and agencies, community organizations. Pursue foundation possibilities. Develop operational application. Conduct meetings and discussions to determine readiness for satellite and fund drive. Hold "open house". ISSUE <u>Newsletter</u>, <u>Bulletin</u>.

EPOCH PILOT PERIOD 1966 - 1967

JANUARY 15 - MARCH 31	APRIL - MAY 1
Decide on working drawings' direction for school units. Determine technological complement of building. Identify short- and long-term resource needs. Forecast short- and long-term plans. Complete cost figures for school units.	Analyze total needs of Berkeley unit--estimates, schedule of costs. Prepare working drawings for satellite school unit. Publish long- and short-term needs of resource program for schools. Publish long- and short-term demonstration facilities for schools.
Pre-test new programs. Develop school interaction through teacher laboratories. Prepare advanced multi-media humanities programs for dissemination. Prepare for review outline of resource bank storage system and EPOCH Data Card reference system.	Determine curriculum areas most in need of enrichment support. Devise humanities "packages" for experiment in school in elementary and secondary grades. Cost figure units.
Analyze pupil-planned visits of EPOCH experimental classes. Hold parent seminar from first visit classes. Conduct concurrent evaluation. Compile observational records. Carry on school check of first experimental classes. Start analysis of data where possible.	Review findings of classes in first experimental evaluation design period. Compile report on all phases of activity. Evaluate experimental class period with teacher seminar, pupil seminar, and parent seminar. Complete analysis of data.
Continue broad dissemination program. Disseminate evaluation results through newsletter and separate brochures. Complete funding plans for Berkeley Unified School District approval. Submit operational application. Complete equipment and furnishing studies for new location. Determine total plan. Launch satellite plan. Prepare summer workshop. ISSUE Newsletter, Bulletin.	Disseminate findings in educational journals. Adopt funding plans for implementation in operational phase. Move to new location. Develop plan for sale of Bulletin series. Subscriptions to EPOCH programs. District subscription to services. Building ready for occupancy June 1. Open house, fund drive. ISSUE Newsletter, Bulletin.

TENTATIVE PROGRAM PLANS

INTRODUCTION WITHIN THE DEMONSTRATION CHAMBER:

I Orientation - students use the EPOCH Orientation Table where pie-shaped segments of the world are cut into 100 year circles of time and 2-and 3-dimensional figures are stationed in time and place to highlight men's cultural achievments in the arts and sciences.
Time: 15 minutes for exploration and discussion.

II Demonstration - students then view projection on the walls of the chamber (a 22' enclosure of 13 5x10' panels). Images can be projected using slides, filmstrips, 8mm loops, 16mm movies and overhead projection where needed - and, on one screen, details may be drawn on the projected image of any map as occasion demands. Thus a series of images from scientifically located projectors can build progressive steps in developing an idea and hold them for comparison and contrast. Twenty-five feet of related images can show and thus convey most effectively sequence or development or almost a feeling of encirclement. Sound equipment for records and tapes will be used along with the visuals.
Time: 15 - 20 minutes presentation combining audio and visual programmed materials will be followed by discussion.

III Individualized activity for teachers lab experience, for student discovery and further development of the demonstration themes. Carrels and lab stations adjoining demonstration chamber provide books, slides, films, prints - individual equipment and art materials.
Time: 20 - 30 minutes for involvment and interaction.

IV Opportunities for responses by teachers and students on tapes, written or pictorial will follow the demonstrations.
Time: Approximately 10 minutes.

SAMPLE VISIT OUTLINES FOR A THREE-VISIT PLAN:

A fifth Grade group focussing on the Social Studies Main Idea of "Many different groups of people have contributed to the culture of America".

Pre-visit Preparation: Students have discussed how they have happened to live in their present locality. They have interviewed teachers, tradesmen, relatives and others in the community for answers to such questions as: When did they or their ancestors come to America? Where did they first settle? What was their occupation before coming to America and after they arrived here?

First Visit might include: EPOCH introduction at the Orientation Table. This tactile involvment and opportunity to visualize the organization as a whole should stimulate interest, and reinforce the learning situation.

Discussion and interaction with guiding member of EPOCH staff and teacher would occur throughout the approximately ten minute period.

A notebook for each student will have been prepared in advance with questions, illustrations and areas for student notations to assist in the visits. Use of the notebook will be discussed in the introductory period.

II In the demonstration the audio and visual materials will give life and reality to such questions as "What problems did they face?". The area will be programmed for related information.

a. Over several screens could be projected the map of the United States and within this space film loops illustrate different physical and social environments in Massachusetts and Virginia.

b. As they compare these three minute vignettes, slides and tapes can pick up comparisons in providing food, shelter and clothing with flash-backs to what they had left behind in the other countries from which they came.

III & IV From this area there have been clues on the Orientation Table that lead to resource banks equipped with film strips and viewer, tapes and recorder, records and player, loops and projector, books, prints and listening posts.

Some students will want to immediately explore these clues; others may wish to express the impressions they have received. Areas for responding, creating or further search for information are outside the demonstration chamber.

SECOND VISIT MIGHT INCLUDE:

I With the over-all focus of "What knowledge and skills did they bring to America and what new skills had to be learned?", the students could explore examples of artifacts, tools, equipment, types of shelter, communication and transportation on the Orientation Table. These would reflect a comparison of the period of discovery of America and the colonial period within the North American continent and around the world at that time, including both the northern and southern hemispheres.

II The teacher would have pre-selected certain comparisons of knowledge and skills brought with each group or individual to America in the 15th century.

Ocean Voyages — Vignettes of key areas such as five minutes with comparative ventures in notable navigation exploits including Columbus, Magellan, Vasco de Gama, Cabot, with those of the Chinese, Japanese, and East Indian naval enterprises.

Science & Technology — Leonardo da Vinci was creating astonishing inventions in the Mediterranean area, while in the Orient the invention of the first metal type was in line with Gutenberg's moveable type. The work of Behaim and Toscanelli coincided with the development of the paper mill in England.

Arts — In the arts, da Vinci again comes to the fore with the accompanying artistry of Botticelli, Piero della Francesca, the building of the Sistine Chapel, the van Eyck brothers in Central Europe, the Blue Mosque of Tabriz and Pipaki Kao's "The Story of the Lute" in China with the poetry of Santillana of Spain, Francois Villon of France, Wolkenstein of Germany and the shadow plays of the INdians.

III After these stimulating insights into comparable periods of development, the students can go to the individualized resource and exploration areas to compare progress in historical events, literary and philosophical movements in developments, each of the arts of music, drama, painting, sculpture, poetry and dance with those of the colonial period and those of today.

THIRD Visit of the group to EPOCH might bring to life the changes that were brought about by these people with an emphasis upon "How have different people coming to America made a lasting contribution to American life today?"

I Symbols of artifacts, objects, language and ideas that can show a traceable relationship to contributions of peoples over the world to current American culture can be seen and handled on the Orientation Table.

II From the ensuing discussion and focus, highlights can be selected among language, religion, the arts, ideas of government and education, scientific discovery, architecture, fashion, personal adornment, and other cultural influences. These can bring into view with appropriate sound or discussion the comparisons needed.

III From the program exchange the students then further explore, interpret and compare through the variety of media available the individual and small group activity they need.

IV The evaluative measures other than observational techniques employed at the EPOCH center will be administered at the school.

Curriculum specialists are now preparing for EPOCH program outlines and suggested materials at the elementary and secondary level. Particularly at the secondary level emphasis will be placed on comparison between the present and the past. The parallels will be seen in music, art, literature, history. They will be studied from the standpoint of present day Africa, ancient Greece, modern Europe - with attention to the continuum of culture, the adaption tosocial change, etc.

Interdisciplinary relationships will be stressed at the secondary level.

EVALUATION

For EPOCH Pilot Activities Period, June 1967 to June 1968

The plan of the evaluation study corresponds to the educational objectives of the project and procedures will measure changes in student attitudes and behavior in relation to exposure to EPOCH demonstrations.

I. Short-term objectives and hoped for outcomes

a. Expose students to audio, visual and tactile learning experiences in the humanities in both group and individualized situations.

Anticipated outcomes: observable student differences in response to audio, visual and tactile learning

b. Increase student understanding of the interrelationships of literature, history, the arts and sciences.

Anticipated outcomes: improved understanding of selected examples of the interrelationship of man and his physical environment, economic and social development, means of communication and creative expression

c. Improve student exposure to the basic principles and interrelationships in each of the creative arts.

Anticipated outcomes: improved understanding of the application of balance, rhythm, variation, harmony and contrast in music, art, drama, poetry and the dance

d. Expand student use of school and community cultural resources

Anticipated outcomes: more individual and/or family visits to libraries, museums, concerts and other cultural offerings after EPOCH exposure

II. Personnel Involved

a. Berkeley Unified School District educational psychologist and associated evaluation consultants will direct the evaluation program, oversee the administration of standard tests, guide the development of EPOCH instrument: advise teachers' use of the instruments and analyze the final data. [Data regularly produced by the school district for the California State Testing Program will be used when deemed advisable.]

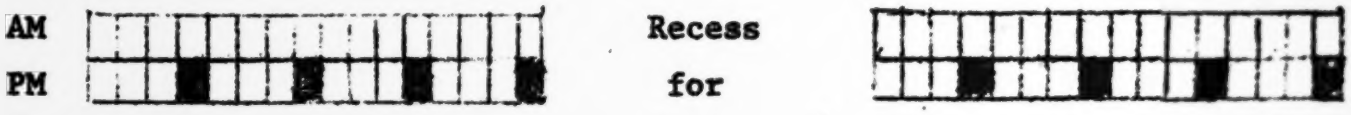
b. Teachers of students in the evaluation study will have been to EPOCH and have indicated their willingness to participate in the evaluation. They will receive pre-visit instructions, cooperatively developed guidelines telling how to use the evaluation instruments and how to collect other data.

III. The proposed instruments during the pre- and post-activity periods

	Administered by
a. The Purdue Attitude Scale	school district
b. Stanford Achievement Supp. Test in Arts and Humanities	school district
c. Stanford Achievement Tests	school district
d. "What I like to do" test (EPOCH design status questionnaire)	teacher
e. An open-ended essay-type of response for students to reflect the appreciation and understanding gained from EPOCH project	teacher
f. Record of library reading, reading interest, AV usage, trips and participation	student and/or teacher

NOTE: These may be kept in a notebook prepared by EPOCH.

Pilot demonstrations will be given in two two-month periods (October to November; January 15 to March 15) two demonstrations daily; two days per week



Approximately 60 demonstrations will be in the evaluation study (eight will be reserved for special program development)

Participating students will be in four evaluation sections.

SECTION I	High Exposure - 3 visits in fall	180	360
SECTION II	High Exposure - no fall visits, 3 in spring	180	
SECTION III	One visit only, through spring and fall	240	
SECTION IV	Control, no visit group	120	
	Total students in study	720	

Measurements will be made as shown:

Pre-test		Post-test	Pre-test		Post-test
	Section I, 3 visits			Sec. I: 1/2 EPOCH conf. / 1/2 no conf.	
"	Section II,3 visits	"	"	Sec. II, 3 visits	"
"	Sec. III, 3 visits	"	"	Sec. III, 1 visit each	"
"	Sec. IV, no visit	"		Sec. IV, no visit	"

Each visiting group in the sections will be tested before and after the EPOCH visit. To take into account normal maturation, Section I will be tested before and after the visit and again at the end of the second demonstration period (March). Section II will be tested at the beginning of the first demonstration period (October) and before and after their visits at the end of the spring demonstration period (March). The groups in the control sections will be tested at comparable times.

To further identify any changes due to EPOCH visits, one-half of Section I will have a conference discussion on the EPOCH visits, one will not.

Relatively small numbers of students will be involved in the pilot demonstration in comparison to the ultimate widespread usage of the program when established within individual school districts or in a regional center.

The design for the evaluation study was developed by Mr. Arthur Elliot, Educational Psychologist of the Berkeley Unified School District, in cooperation with Dr. Walcott Beatty, of San Francisco State College, Mr. Edward Larsen of the Educational Research Department of Oakland Public Schools, and Mrs. Florence Oaks of the San Ramon Valley Unified School District.

Plans for Operational Period 1968-1969

1. <u>Continue resource search and program development</u>	New methods to evaluation of resources New directions for program development New programs at EPOCH New instructional units for schools
2. <u>Extend Humanities Demonstrations</u>	Berkeley school center Programs in schools In-service education Workshops and institutes
3. <u>Increase involvement</u>	Berkeley Unified School District Berkeley community Alameda County Bay Area State
4. <u>Expand Dissemination</u>	Newsletter Bulletin Filmstrip Radio and TV Tapes and video tapes Visits of groups Talks to groups Publications
5. <u>Develop support</u>	Berkeley Unified School District Alameda County Exploration of activities such as: subscription to services subscription to newsletter subscription to bulletin sale of programs and tapes sale of plans and guides catalogue of programs cooperation with publishers and producers of teaching materials

Facilities better suited to future operation are now under investigation:

<u>SITE Now Identified by Berkeley Unified School District</u>

A location for EPOCH on the grounds of Garfield Junior High School, 1781 Rose Street, is proposed. This is an integrated 7th and 8th grade school. Nearby is Jefferson, an integrated elementary school; Whittier, a University demonstration school, and Oxford and Thousand Oaks Schools. These schools are in a central Berkeley area with culturally diversified school populations.

<u>BUILDINGS Are Being Investigated for Lease-Purchase</u>

1. Commercially available re-locatable units (do not as yet meet the needs)
2. An EPOCH designed school satellite (inexpensive plasterbox construction) contractor financed - two year lease-purchase. This is under intensive study at this time. It seems to offer an excellent solution not only for the Berkeley situation, but as <u>a far-reaching practical experiment in design-function-construction-experience from which a REPLICABLE SCHOOL UNIT could be widely adapted all over the U.S.</u> Early estimates are encouraging.